

# REMARKS

## I. The Supplemental Amendment & Time Extension Fee

A supplemental amendment dated February 1, 2007 was filed and entered on or about February 1, 2007. However this supplemental amendment arrived too late to be considered during examination of the above-identified application that was reported in the outstanding Office Action dated February 1, 2007. The above-indicated changes in the claims are changes in the new claims 27 to 38 filed in the supplemental amendment.

Since the supplemental amendment was entered after the Office Action dated February 1, 2007 according to the Image File Wrapper in Public Pair, it is respectfully requested that the supplemental amendment dated February 1, 2007 be considered the response to the Office Action dated February 1, 2007. Thus no additional time extension fee should be required.

## II. The Claim Changes

The only claim changes made in the claims are changes in the dependent claims that claim preferred embodiments of the method limited to special types of applied voltage.

The dependent claims 28, 31, 35, and 38 have been changed to state that the voltage applied in the method claimed in the independent claims **is** a D.C. voltage instead of "comprises a D.C. voltage". Basis for this change is found on

page 6, lines 4 and 5 of applicants' originally filed specification. The applied voltage may be a D.C. voltage with no A.C. component. However in order to provide the necessary polarization of the surface of the glass body to be press molded so that sticking is avoided, the applied voltage must always contain a D.C. component; it cannot be a symmetrical A.C. voltage. For that reason the specification on page 6 only mentions an asymmetrical A.C. voltage.

On the other hand, dependent claims 29 and 32 have been changed to state that the voltage applied in the claimed method comprises an A.C. voltage instead of is an A.C. voltage. As noted above, the reason is because the applied voltage must always have a D.C. component. Basis for this change is found on page 6, lines 4 and 5, of applicants' originally filed specification.

An explanation of the basis for the wording of the claims filed in the supplemental amendment is provided in the REMARKS section of the supplemental amendment. Please consult section II of the REMARKS section of the supplemental amendment if there is any doubt regarding the basis for the claim wording in the new claims filed in the supplemental amendment in the original disclosure.

### **III. Relation of the New Claims to Ribes, et al**

This section partially repeats the argumentation for allowance of the new claims 27 to 38 provided in the supplemental amendment.

It is respectfully submitted that none of the new claims 27 to 38 should be rejected as anticipated by or obvious over Ribes, et al, US Patent 6,279,346.

Ribes, et al, does disclose a method for reducing hot sticking of a glass body during molding the glass body by polarizing the glass body with a D.C. or an A.C. voltage applied across the glass body (column 2, lines 13 to 21, and column 3, lines 50 to 62, and example 3).

However Ribes, et al, do not disclose producing an optical component with surface dimension fluctuations (i.e. contour deviation or shaping accuracy) of less than 100 nm by molding a glass body with a special molding process including special heating and pressing stages as claimed in claims 27 to 38, especially independent claims 27 and 30.

Ribes, et al, do not disclose the particular steps of independent claims 27, 30, 33 and 36, which were required to obtain the optical component with the good quality with dimension fluctuations of no more than 100 nm.

For example, Ribes, et al, does not teach applying a maximum pressure when the glass body and mold reach a common temperature during heating and then maintaining the maximum pressure and the mold temperature constant during a first press stage. Ribes, et al, do not teach simultaneously reducing the pressure and temperature during a second press stage following the first press stage.

Conventional pressing processes like those described in Ribes, et al, are not particularly concerned with the design of a special sequence of pressing and heating stages, as shown in applicants' figures and claimed in the claims of the supplemental amendment. However the particular pressing and heating sequences disclosed and claimed by the applicants are extremely important to

ensure a "tight" contact of the mold with the glass. Good heat transfer from the glass to the mold is essential and must be symmetrical. The thermal history of the glass body is extremely important for the accurate shaping of the glass body, which is especially important in the case of a lens. This also applies to the time for which parts of the lens surface are still in contact with the mold surface. If the lens already detaches in some parts and still adheres to the mold in others, this can result in an uneven shrink fit of the lens so that the desired contour is not achieved.

The particular press and heating stage sequences that will provide the most accurate contour for the product are by no means obvious from the prior art.

No relevant information regarding the press and heat stage sequences is provided in Ribes, et al.

Particular temperatures and pressures at the beginning and ending of the press and heat stages are not reported in the applicants' disclosure because they depend on the particular composition of the glass body being molded.

It is well established that each and every limitation of a claimed invention must be disclosed in a single prior art reference in order to be able to reject the claimed invention under 35 U.S.C. 102 (b) based on the disclosures in the single prior art reference. See M.P.E.P. 2131 and also the opinion in *In re Bond*, 15 U.S.P.Q. 2nd 1566 (Fed. Cir. 1990).

Applicants claim a method of precision pressing a glass body to obtain a precisely shaped optical component, such as a lens, with dimension variations or

contour deviation of no more than 100 nm. The applicants' method is improved in relation to the prior art because it can be performed more rapidly because the application of the voltage allows the glass to be brought to a higher temperature in the mold so that it has a lower viscosity and is more easily pressed accurately. Because the process is more rapid, throughput can be increased and/or manufacturing costs reduced.

For the foregoing reasons it is respectfully submitted that the amended claims 27 to 38 should **not** be rejected as anticipated under 35 U.S.C. 102 by or obvious under 35 U.S.C. 103 (a) over Ribes, et al.

Should the Examiner require or consider it advisable that the specification, claims and/or drawing be further amended or corrected in formal respects to put this case in condition for final allowance, then it is requested that such amendments or corrections be carried out by Examiner's Amendment and the case passed to issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing the case to allowance, he or she is invited to telephone the undersigned at 1-631-549 4700.

In view of the foregoing, favorable allowance is respectfully solicited.

Respectfully submitted,

**/ Michael J. Striker /**

Michael J. Striker,  
Attorney for the Applicants  
Reg. No. 27,233